Getting Started with the NCCS

NCCS USERS MEETING

Robert Whitten Jr

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Outline

- **Computational resources**

- **Support options**

- **Common features**

- **Managing your allocations**

- **X1E overview**

- **XT4 overview**

Jaguar - Cray XT4

- **11,708 Nodes**

- **2.6Ghz dual core AMD Opteron**
  - Compute nodes
  - Service nodes

- **119TF**

- **46TB Main Memory**

- **600TB Local Disk**

- **Lustre filesystem**

- **Unicos/lc**
  - Linux/Catamount

- **250TF coming. . .**

Phoenix - Cray X1E

- **1024 Multi Streaming Processors (MSP)**

- **2TB Memory**

- **18.5TF**

- **Largest X1E**

- **Linux cross compiler**
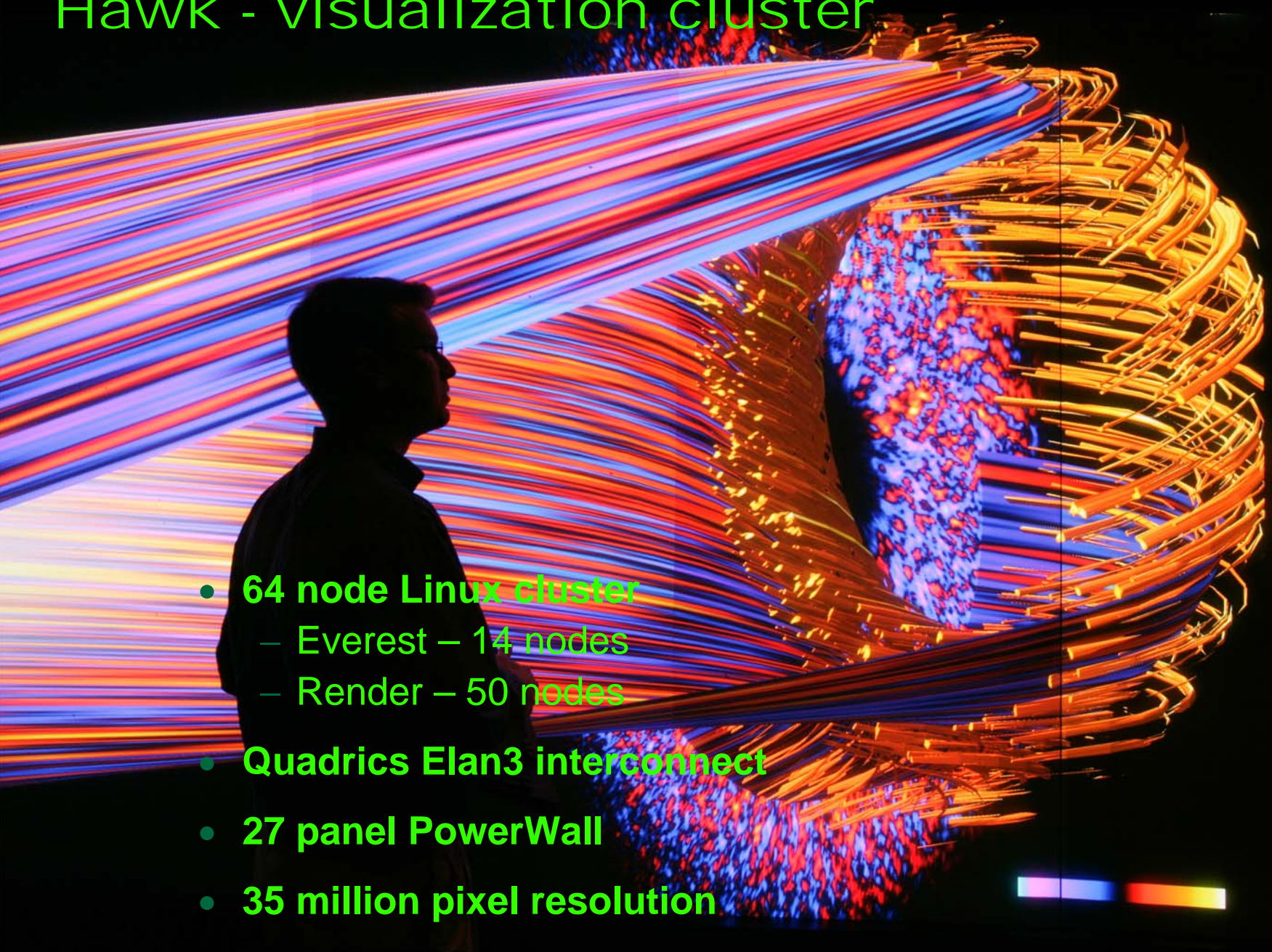 - robin.ccs.ornl.gov
  - robin1.ccs.ornl.gov

Ram - SGI Altix

- 2?? Intel Itanium2 processors

- 2TB shared memory

- Resource for pre/post processing of data

Hawk - visualization cluster

- **64 node Linux cluster**
  - Everest – 14 nodes
  - Render – 50 nodes

- **Quadrics Elan3 interconnect**

- **27 panel PowerWall**

- **35 million pixel resolution**

HPSS – Mass Storage

- **Tape library and disk storage**
  - 6 second access time

- **Suitable for backup and long term storage**

- **1.3PB stored data**

- **Expandable to 5PB**

- **hsi to access**
  - FTP-like interface

How to get help:

- **Web (www.nccs.gov)**
  - System status
  - FAQs
  - Available software

- **Email (help@nccs.gov)**
  - User Assistance Center
  - M-F 9am-5pm ET

- **Phone (865-241-6536)**
  - 24/7

System Status

Jaguar   Phoenix   Ram

Hawk   HPSS

Contact the NCCS User Assistance Center

Web support

- **System Status**
- **Resource Info**
- **Available software**

Email support

- **help@nccs.gov**

- **RT system**
  - Automated response

- **Help us help you**
  - Username
  - Description
  - Machine
  - Error messages

- **Distribution Lists**
  Jaguar: https://email.ornl.gov/mailman/listinfo/jaguar-notice
  Phoenix:https://email.ornl.gov/mailman/listinfo/phoenix-notice

Dear NCCS User,

This is an automated response to your NCCS support inquiry.
been assigned ticket #14516. If you wish to add more informati
ticket, simply reply to this message without modifying the subj
report a separate issue, email help@nccs.gov with a new subje

For the fastest possible response, make sure your ticket includ
name, the system name(s) and the location of any executables,
output files related to the error. For batch jobs, please include
number.

Information including scheduled outages, system availability,
current system issues can be found at http://info.nccs.gov.

The NCCS User Assistance Center is staffed Monday through
AM to 5:00 PM Eastern Time.

NCCS User Assistance Center

Phone support

- **24/7 phone support**

- **Staffed daily**
  - M-F 9am-5pm ET

- **865-241-6536**

- **Monthly teleconference**
  - All NCCS users invited

Common features

- **NFS shared home directory**
  - 500MB quota

- **Scratch space**
  - Temporary storage on lustre filesystem
  - /tmp/work/<username>
  - Daily sweep for files >7 days old

- **Access to HPSS**

- **One time password access**

- **Totalview debugger**

- **Modules**

Connecting

- **Use Secure Shell**
  - ssh userid@<machine>.ccs.ornl.gov
  - ssh bob@phoenix.ccs.ornl.gov

- **One time password**
  - RSA SecurID
  - PASSCODE = PIN + Token Code
  - SSH client need keyboard-interactive

Token code

611431

Time bars

Modules

- **Consistent environment setup**

- **Commands**
  - module list
  - module avail
  - module load <module>
  - module unload <module>
  - module swap <old> <new>
  - module purge
  - module help

- **Examples**
  - module load subversion
  - module load modules (man pages for module)

Tips

- **Home directory quota 500MB**
  - Use scratch space - /tmp/work/<user>

- **Use *lsquota* to determine disk quota**

- **HPSS works best with >1GB files**
  - tar cvf - . | hsi put - : data.tar

- **Need software installed?**
  - module load avail
  - help@nccs.gov

Accounting

- **Every project has an identifier**
  - FUSXXX, CHMYYYzzz, etc

- **Include in PBS scripts**
  - #PBS –A FUS123

- **No identifier = no submission**

- **Aids in proper accounting of allocations**

Managing Allocations

- **Adding access or users**
  - https://secure.ccs.ornl.gov/request.new.html

- **Subprojects**
  - Available by request

- **Project web space available**
  - users.nccs.gov/<projectID>

- **Allocation usage**
  - Available on project pages
  - command line - %> showusage

Special Requests

- **Exceptions to NCCS policies are possible**

- **Relaxed Queue Limits**
  - Need to run a job longer that normal queue limits?

- **System Reservation**
  - Need dedicated access for important jobs?

- **Disk Quota Increase**

- **Scratch Purge Exemption**

- **☐http://info.nccs.gov/resources/general/specialrequests**

How can we help you?

- **Suggestions encouraged**
  - help@nccs.gov
  - https://info.nccs.gov/forms/specialrequest/suggestion.php